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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
08/865,962	05/30/97	NIELSEN J	2860-058

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EXAMINER	
EDELMAN, B	
ART UNIT	**PAPER NUMBER**
2153	20

DATE MAILED: 05/09/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary	Application No.	Applicant(s)	
	08/865,962	NIELSEN, JAKOB	
	Examiner	Art Unit	
	Bradley Edelman	2153	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *27 February 2001* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *23-39* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *23-39* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

15) ☒ Notice of References Cited (PTO-892)
16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
17) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
18) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
19) ☐ Notice of Informal Patent Application (PTO-152)
20) ☐ Other: .

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

2. Claims 26, 31, 32, and 34-39 are rejected under 35 U.S.C. 102(a) as being anticipated by Chen et al. (Threshold-Based Admission Control Policies for Multimedia Servers; The Computer Journal, Vol. 39, No. 9, 1996, hereinafter "Chen").

In considering claims 31, 36, and 38, Chen discloses a method and computer program product for operating a server on a network (or controlling communications by a process running on a processor connected to a network) comprising means for:

allocating communications bandwidth to a plurality of connections from the network to the processor based on at least one set of priorities (col. 4, lines 2-5).

In considering claims 32 and 39, Chen further discloses that the priorities include at least one of: type of information being retrieved, how fast user connections can receive information, which part of a document is being transmitted, user identity, and stored indicia indicating importance of the document (i.e. input characteristics, and priority-class clients; col. 4, lines 3-5, 11-13).

In considering claim 33, Chen further discloses allocating bandwidth according to a ratio of the priority that a user connection bears to the sum of priorities of all user connections (col. 5, last paragraph).

In considering claim 34, Chen further discloses recalculating the bandwidth on an event driven basis (i.e. new client requests, col. 4, lines 23-29).

In considering claim 35, Chen further discloses that events triggering recalculation include at least one of: arrival of a new request for retrieval, finishing sending information in response to a retrieval request, cancellation of a retrieval request, detection of the inability of a user connection to use all of the bandwidth allocated to it, a change or priority, and timeout of a timer (page 3, "System Model").

In considering claim 37, Chen further discloses that the priorities are based on the state of application processes running on the processor (i.e. input characteristics of client requests at the server inherently change the state of application processes running on the server processor, col. 4, lines 11-13).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 26-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chen.

In considering claims 26 and 28, Chen discloses a computer apparatus for allocating communication bandwidth, comprising a server configured to allocate communications bandwidth to a plurality of user stations over a communications interface based on at least one set of priorities (col. 4, lines 2-5), wherein the at least one set of priorities comprises priorities based on user station identity (i.e. different priority clients – col. 4, lines 16-19), and priorities based on the state of application processes running on the server processor (i.e. input characteristics of client requests at the server inherently change the state of application processes running on the server processor, col. 4, lines 11-13).

Although the system taught by Chen does not explicitly disclose the use of a bus connecting the client stations to the server, the use of a bus is a well known network standard. It would have been obvious to a person having ordinary skill in the art to use a bus to connect the clients to the server disclosed in the system taught by Chen, because buses provide a reliable, high-bandwidth communication medium for local area networks.

In considering claim 27, Chen discloses a computer apparatus for allocating communication bandwidth, comprising a server configured to allocate communications

bandwidth to a plurality of user stations over a communications interface based on at least one set of priorities (col. 4, lines 2-5).

Although the system taught by Chen does not explicitly disclose the use of a bus connecting the client stations to the server, the use of a bus is a well known network standard. It would have been obvious to a person having ordinary skill in the art to use a bus to connect the clients to the server disclosed in the system taught by Chen, because buses provide a reliable, high-bandwidth communication medium for local area networks.

Furthermore, although the system taught by Chen teaches substantial features of the claimed invention, it fails to disclose the at least one set of priorities comprising priorities based on a stored indicator indicating importance of a document being retrieved by a user station. Nonetheless, it would have been obvious to a person having ordinary skill in the art to allow one of the prioritization workload characteristics taught by Chen to include importance of requested documents so that the most important documents can be downloaded fastest in case of a connection failure.

4. Claims 23 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chen, in view of Gotwald (U.S. Patent No. 5,987,518).

In considering claims 23 and 24, Chen discloses a computer apparatus for allocating communication bandwidth, comprising a server configured to allocate communications bandwidth to a plurality of user stations over a communications interface based on at least one set of priorities (col. 4, lines 2-5).

Although the system taught by Chen does not explicitly disclose the use of a bus connecting the client stations to the server, the use of a bus is a well known network standard. It would have been obvious to a person having ordinary skill in the art to use a bus to connect the clients to the server disclosed in the system taught by Chen, because buses provide a reliable, high-bandwidth communication medium for local area networks.

Furthermore, although the system taught by Chen teaches substantial features of the claimed invention, it fails to disclose the at least one set of priorities comprising priorities based on type of information being retrieved by user stations, and/or how fast user connections can receive information. Nonetheless, assigning priorities for connections in a bandwidth allocation system according to type of information retrieved and speed of user connections is well known as evidenced by Gotwald. In a similar art, Gotwald describes a system for sending data from a server to various clients, wherein "certain connections can be provided with a priority in the output multiplex... priority can be base, for example, on the source address for the IP data, the destination IP address, the *data type* and/or the *connection type* [emphasis added]." See col. 4, lines 55-65. Given the teaching of Gotwald, a person having ordinary skill in the art would have readily recognized the desirability and advantages of including such prioritization categories as taught by Gotwald, in the prioritized admission control system taught by Chen, in order to utilize communication bandwidth most efficiently (see Gotwald, col. 4, line 66 – col. 5, line 21). Therefore, it would have been obvious to modify the prioritized admission control system taught by Chen with the priority schemes taught by Gotwald.

Claim 25 is rejected under 35 U.S.C. 103(a) as being unpatentable over Chen, in view of Tognazzini et al. (U.S. Patent No. 5,731,805, hereinafter "Tognazzini").

In considering claim 25, Chen discloses a computer apparatus for allocating communication bandwidth, comprising a server configured to allocate communications bandwidth to a plurality of user stations over a communications interface based on at least one set of priorities (col. 4, lines 2-5).

Although the system taught by Chen does not explicitly disclose the use of a bus connecting the client stations to the server, the use of a bus is a well known network standard. It would have been obvious to a person having ordinary skill in the art to use a bus to connect the clients to the server disclosed in the system taught by Chen, because buses provide a reliable, high-bandwidth communication medium for local area networks.

Furthermore, although the system taught by Chen teaches substantial features of the claimed invention, it fails to disclose the at least one set of priorities comprises priorities based on which part of a document is being transmitted. Nonetheless, prioritizing allocated bandwidth based on which part of the document is being transmitted is well known, as evidenced by Tognazzini. In a similar art, Tognazzini discloses a system for dynamically allocating bandwidth to particular portions of a requested document according to which parts of the document are being transmitted (col. 12, lines 14-24). Given the teaching of Tognazzini, a person having ordinary skill in the art would have readily recognized the desirability and advantages of including allocation based on which part of a document is being transmitted, as taught by

Tognazzini, in the bandwidth allocation priority system taught by Chen, so that the most interesting sections of documents can be downloaded fastest for better user enjoyment. Therefore, it would have been obvious to modify the prioritized bandwidth allocation system taught by Chen with the partial document bandwidth allocation priority option taught by Tognazzini.

Claims 29-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chen, in view of Waldron, III (U.S. Patent No. 5,428,789, hereinafter "Waldron").

In considering claim 29, although the system taught by Chen teaches substantial features of the claimed invention, it fails to disclose the state of application processes comprising the foreground or background state of a process. Nonetheless, setting a priority among running processes according to a foreground or background state of the processes is well known, as evidenced by Waldron. In a similar art, Waldron discloses a system for running multiple processes at a user computer, wherein processing priority is given to processes running in the foreground (col. 2, lines 29-39). Given the teaching of Waldron, a person having ordinary skill in the art would have readily recognized the desirability and advantages of prioritizing bandwidth allocation in the system taught by Chen according to the foreground or background state of application processes, as taught by Waldron, so that the currently viewed application can be run or downloaded most quickly. Therefore, it would have been obvious to use the foreground or background priority system taught by Waldron in the system taught by Chen.

In considering claim 29, although the system taught by Chen teaches substantial features of the claimed invention, it fails to disclose the state of application processes comprising a degree to which a window in which a process is running is ready for use by a user. Nonetheless, setting a priority among running processes according to a degree of readiness for use by a user (i.e. whether the process is in a foreground or background state) is well known, as evidenced by Waldron. In a similar art, Waldron discloses a system for running multiple processes at a user computer, wherein processing priority is given to processes running in the foreground (i.e. the processes which are most ready for use by a user, col. 2, lines 29-39). Given the teaching of Waldron, a person having ordinary skill in the art would have readily recognized the desirability and advantages of prioritizing bandwidth allocation in the system taught by Chen according to the degree of readiness for use of application processes, as taught by Waldron, so that the currently viewed and thus most usable application can be run or downloaded most quickly. Therefore, it would have been obvious to use the degree of use priority system taught by Waldron in the system taught by Chen.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bradley Edelman whose telephone number is (703) 306-

3041. The examiner can normally be reached on Monday to Friday from 8:30 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glen Burgess can be reached on (703) 305-4792. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305-7201.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-3900.

GLENTON B. BURGESS
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100

BE
April 26, 2001